

What is claimed is:

1. A crystalline acetic acid solvate of the compound 4-hydroxy-2-methyl-N-(5-methyl-2-thiazolyl)-2H-1,2-benzothiazin-3-carboxamide-1,1-dioxide (meloxicam).
2. The crystalline acetic acid solvate according to claim 1, having a melting point of $T_{mp.} = 263 \pm 5^{\circ}\text{C}$ (determined by DSC; evaluation by peak maximum; heating rate: 10°C/min).
3. The crystalline acetic acid solvate according to claim 1, the x-ray powder diagram of which has, *inter alia*, the characteristic values $d = 8.47 \text{ \AA}$, 7.90 \AA , 6.51 \AA , 6.03 , 4.74 and 3.43 \AA with an intensity of more than 40%.
4. A process for preparing a crystalline acetic acid solvate according to claim 1 comprising recrystallizing meloxicam from acetic acid.
5. A pharmaceutical composition containing a crystalline acetic acid solvate according to claim 1 together with one or more inert carriers and/or diluents.
6. A method for treating inflammation, acute episodes of intermittent and chronic activated arthrosis, rheumatoid arthritis (chronic polyarthritis), Bechterew's disease, neoplasias, or acute and persistent pain which comprises administering to a mammal in need of such treatment a therapeutically effective amount of a crystalline acetic acid solvate in accordance with claim 1.